From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Tom Norris <badger@telalink.net>
Subject: 328 versus 381 lamps in R-390A
Message-ID: <2.2.32.19961213232052.006a2770@telalink.net>

[discussion of the 32V dial lamp repalcement snipped]

>to change the bulb in a V3, but there is a "better" bulb to use. The 381 is spec'd at 6.3 volts at 0.200 A. The 6.3 is probably better, since that is the nominal voltage on the filament bus in the V3. The BIG difference however is in the rated life of the two bulbs. The 328 is rated at 1,000 hours. The 381 is rated at 20,000 hours!! The package of 381 bulbs that I bought locally had a spec sheet in the box specifying 50,000 hour life.

I replaced the 328 lamps in my R390A with 381's as well. Little difference, only marginally less output as checked with my photo-cheapie light meter. I am all for changing lamps less if at all possible. And it seems like those 381's will last for a good while.

Tom Norris
badger@telalink.net

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: "Garey Barrell, K4OAH" <75025.73@CompuServe.COM>
Subject: 32V Dial Bulbs
Message-ID: <961213204344_75025.73_FHD37-1@CompuServe.COM>

I saw a mention of how easy it is to replace the dial bulbs in the 32V2 transmitter.

"Popping the hood" on the 32V3 ain't that easy!! My 32V3 manual does not specify a particular number for the bulbs, but the voltage and current specifications fit the 328. 6.0 volts at 0.200 A.

After replacing two bulbs in my V3, only to have another one go out a couple of days later, I decided there should be a better way. I don't know of any way to make it easier to change the bulb in a V3, but there is a "better" bulb to use. The 381 is spec'd at 6.3 volts at 0.200 A. The 6.3 is probably better, since that is the nominal voltage on the filament bus in the V3. The BIG difference however is in the rated life of the two bulbs. The 328 is rated at 1,000 hours. The 381 is rated at 20,000 hours!! The package of 381 bulbs that I bought locally had a spec sheet in the box specifying 50,000 hour life.

I realize there are a lot of variables that affect these life expectancy numbers, but 1,000 hours is not very long, and 20,000 (50,000) hours is a LONG time.

The light output is lower for the 381, 0.400 MSCP vs 0.600 for the 328, but the difference in the dial assembly is not noticable unless you have two different bulbs installed and switch back and forth between them.

The Newark price for the 328 is $8.00 for a box of 10 and $9.90 for a box of ten 381s.

I also use 755 bulbs instead of 47 in other equipment. 20,000 hours instead of 3,000.

I REALLY don't like burned out dial lamps!! Especially when they are in difficult to reach places.

73, Garey - K4OAH
75025.73@compuserve.com
Atlanta

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: carl yaffey <cyaffey@sprynet.com>
Subject: 32V dial lights
Message-ID: <2.2.32.19961213144225.0074a034@m1.sprynet.com>

Anybody have a clue as to how to get at and replace the dial lights in a 32V2? A quick glance inside tells me it might not be easy. Before I jump in and screw up something, I thought I'd better ask. TNX in advance, Carl

----
Carl Yaffey K8NU (ex-W4EZB) cyaffey@sprynet.com 614 268 6353 Columbus OH
Banjo player for One Riot One Ranger, independent software developer.

```
                   /~~\\       ,    , ,
                  |#===||==========#***|
                   \__//            ` `
```

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: Cal Eustaquio N6KYR <ceustaqu@dot.w6bhz.calpoly.edu>
Subject: Re: 32V dial lights
Message-ID: <Pine.SUN.3.91.961213074142.8428C-100000@dot.w6bhz.calpoly.edu>

On Fri, 13 Dec 1996, carl yaffey wrote:

> Anybody have a clue as to how to get at and replace the dial lights in a
> 32V2? A quick glance inside tells me it might not be easy.

Heh heh. Betcha everyone thought I'd respond to this one. If you thought that, YOUR RIIIIIIGT!!!!!

Carl:
The changing of the 328 bulbs is not that difficult. Simply pop the hood on your V2, and the bulbs are retained by fingers attached to a phonelic board that clips onto the dial assembly. Simply pry the top clip just enough and move the finger assembly out of the way. The top lamp socket should be empty (since there are no bands but I suspect that Collins may have put that there for a possible 160 meter position for the V xmtrs). Remove the problem lamp, replace, replace the finger assembly and enjoy!

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: Cal Eustaquio N6KYR <ceustaqu@dot.w6bhz.calpoly.edu>
Subject: 32V update
Message-ID: <Pine.SUN.3.91.961213050311.8380A-100000@dot.w6bhz.calpoly.edu>

Well, I took the caps out and instead of raising them on a vari-p.s., I chose to bring them to the T.V. shop where I work and I tested them on a Sencore LC-75 checker at the rated 600VDC. Leakage was nil and caps were within 10% of the rating (3.77 uF). Was still pretty skeptical of the reading until I brought them to a friend who owns another radio repair shop (specializing in BC BA repair and restoration). Used his Sencore LC 101 and read the same. Apparently, he stated that these caps were probably the oil filled paper electrolytics. I thougth these were the conventional types, hence, my attempt. Double checked with the Sencore 1-800 rep. He concurred that the caps are good to go. Well, guess well find out during the smoke test.

I decided that after reinstalling the caps, I could put the unit into the chassis (couldn't wait). My gosh, she's beautiful. The 32V looks good with her "mantle" on. I decided I could do the operational checks with the cabinet on. However, if the grid drive is below 5ma, I may have to remove the cabinet again to gain access to the trimmer caps for a realignment.

Just one remaining question (especially for you 32V types): does the 4D32 require neutralization? I looked at the schematic for a neutralization capacitor. Didn't see one. Maybe I'm overlooking something but just in case, what gives? Let me know. Cal.

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: km1h@juno.com
Subject: Re: 5868 tube specs
Message-ID: <19961213.175003.7119.6.km1h@juno.com>

On Wed, 11 Dec 1996 15:52:18 -0600 (CST) "William L. Fuqua III"
<wlfuqu00@service1.uky.edu> writes:
> Anyone have the tube specs for a Amperex 5868 tube?
>It is about the size of a 4-1000. Can't find it anywhere
>in my books.
>
>73
>Bill

That beastie was primarily used in self excited oscillators and is a poor RF linear performer. Tube mu is about 20 if I remember correctly.

5868/AX9902 Triode
450W Plate Dissapation radiation cooled (not forced air)
4000V Max
650ma Max
100 Mhz max ratings
10V @ 10A filament
Fits the 4-1000/3-1000 socket

I picked up a process unit some years back that had 4 5868's and still have the sockets if you are interested. Not Eimac but Amperex I think, made in Italy.

73..Carl

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: John Shriver <jas@shiva.com>
Subject: Re: 7027's
Message-ID: <199612131953.OAA27668@shiva-dev.shiva.com>

The 7027 is RCA's proprietary version of the GE 6L6GC, but in a unique basing. RCA later relented and made real 6L6GC's. Ratings and curves essentially identical.

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: ARONGV@aol.com
Subject: 8236 Needed & 3B28 Tnx
Message-ID: <961213105409_2018000839@emout08.mail.aol.com>

Hellooo

My thanks to all those who responded to my question about swapping 3B28 tubes for 866 in my Valiant. I'll admit I do
like that blue glow, but your comments lead me to believe I got a very good deal.

Also a note of tnx to those searching old tube boxes in search of those elusive 8236 tubes. If patience is a virtue, I am one very virtuous guy!

The 8236 is a handsome tube. It looks like a tall 8146. Plates are huge, and I've been told it'll be worth the wait to find some.

Ron WZeroOIZ

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: ARONGV@aol.com
Subject: 8236: Still looking
Message-ID: <961213013743_1424657523@emout17.mail.aol.com>

This should be a Dear Santa posting!

Still looking for at least one pair of 8236 tubes.

Also, the Valiant I got in has 3B28 tubes in the 866 sockets. The previous owner claimed they were better than 866s. I'm hesitant to hit the high voltage just to see if he's correct.

Any thoughts on the 3B28s in a Valiant?

I didn't really get taken. Price was right.

Ron WZeroOIZ   ARONGV@aol.com

```
From boatanchors@theporch.com  Fri Dec 13 10:31:39 1996
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: Re: 8236: Still looking
Message-ID: <19961213151827.AAA7831@LOCALNAME>

At 06:40 AM 12/13/96 +0000, you wrote:
>
>This should be a Dear Santa posting!
>
>Still looking for at least one pair of 8236 tubes.
>
>Also, the Valiant I got in has 3B28 tubes in the 866 sockets. The previous
>owner claimed they were better than 866s. I'm hesitant to hit the high
>voltage just to see if he's correct.
>
>Any thoughts on the 3B28s in a Valiant?
>
>I didn't really get taken. Price was right.
>
>Ron WZeroOIZ   ARONGV@aol.com
>
>
>
        The 3B28 tubes are gas rectifiers rather than mercury vapor ones.
The ratings are basically the same.  For all practical purposes in amateur
applications they are 100% interchangeable!
        (Fear not!)

73,
E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, repaired, traded and used!"
417 Ridgewood Drive,
Metairie, LA., 70001
ebjr@worldnet.att.net
**Looking for: ELMAC PMR-7/PMR-12, Hallicrafters SR-75, 860 tubes**



From boatanchors@theporch.com  Fri Dec 13 20:46:38 1996
From: Richard Hager <rhager@millcomm.com>
Subject: Re: 8236: Still looking
Message-ID: <32B20466.17C4@millcomm.com>

ARONGV@aol.com wrote:
```

>
> This should be a Dear Santa posting!
> Still looking for at least one pair of 8236 tubes.--

Ron,

At the same time you've been posting the '8236 search' msgs, someone offered several pair of NIB 8236's right here on BA. I guess you must not have gotten the mail reflected to you.

You might check the BA archives for the last week or two. It wasn't very long ago. Good luck!

Richard Hager

+ Ah-ha! Design Group, Inc.   -
+ Precision CNC Technology, since 1991 -
+ 612-641-1797, Fax: 612-641-8681   -
+ "I just like to make things" So...   -
+ please call Ah-ha! directly for CNC info   -
+ http://www.gdic.com/ahha email: ahha@gdic.com -

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Ronnie Hull <larebel@ms1.nwla.com>
Subject: Airbone SSB
Message-ID: <1.5.4.16.19961213193510.235fba4c@ms1.nwla.com>

howdy fellow anchormen

while not exactly on the boatanchor topic, I have a question that some of you are bound to be able to answer. I recently found some notes I had jotted down in the mid 60's. While shortwave listening in the 11 mhz band, I ran across some airborne SSB transmissions. The were obviousley military. There were 3 or 4 different transmissions from different locations, all with 3-alpha messages directed to someone called "sky king" .

typically, these would start at 17 minutes after the hour. A typical transmission would be "sky king, sky king, this is democrat, this is democrat, do not answer, break break. The following is a 3-A message in two part. etc etc.

Democrat was one of the 4, I can't remember the others names, all calling sky king. The different locations would follow each other, 4 or 5 minutes apart, all calling Sky king.
Was this a SAC airborn command post? Or, was Sky King the command post? Who was this, what was the purpose? What sort of aircraft did these signals originate from? What kind of equiptment was used? I remember seeing

something about it in Popular Electronics many many years ago, but I can't remember all about it.

Since a lot of your fellows are obviously ex-military (I was army and if it didn't have anything to do with slugging it out in the mud, I have no idea!!) maybe some of you can enlighten me.

Ronnie - W5SUM

thanks in advance.

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: berg stephen erik <z931086@corn.cso.niu.edu>
Subject: Any HF Rigs Available?
Message-ID: <Pine.3.89.9612130800.A6576-0100000@corn.cso.niu.edu>

One of my friends who lacks net access has just sold his IC-706. After it blew up 3 times in the past 6 months, he has had enough. Now, he is looking for an American Made Boatanchor HF rig. He is curently a Tech + and wants to upgrade, so he needs something that works passably well on CW as well as SSB. Does anyone here on the List have a functional old tube type radio my friend could purchase? He is looking for a National, Drake, Hallicrafters or a Swan unit. Please reply to me by private e-mail, and I will pass the particulars along to him.

73,

Steve WA9JML

z931086@corn.cso.niu.edu

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: anders@autopsy.corp.sgi.com (Greg Anders)
Subject: AR-88 - I'm sold...
Message-ID: <9612130934.ZM5623@autopsy.corp.sgi.com>

I'm sure there are several who already enjoy the special pleasure of using one of these gems. I just picked up mine yesterday. On the appearance scale its about a 7/10 but when it comes to the performance, I think it deserves
a solid 10.

The case has been repainted and will have to be stripped and recoated. The previous owner has one other AR-88 and it has a very professional black wrinkle finish. Can anyone tell me if this is original? I would like to redo mine authentically. I believe the front panel is original and I probably won't refinish it as there are no scratches or mars. I will have to refill some of the embossed white lettering as it is worn away in several places.

Operationally, everything works as billed. The filter switch acts like it needs a cleaning but thats part of a standard bathing procedure for any acquisition of this nature. Last night I hooked up a 5" speaker and was astonished at the receivers performance on 80M and the commercial band between 5.9 and 6.2mc. This rig has not been aligned probably in at least 20 years and yet I would describe it as Hot! with regard to sensitivity and I'm amazed at how good the selectivity is. Switching from wide open thru the five positions of selectivity seems almost like switching in gradually narrower 8 pole filters. The audio was very smooth and should sound super with a good 8" speaker. BTW, the seller showed me the rather uniqe screwless coils in the main tuning section.... Very interesting.

At any rate, I'm beginning to understand the popularity of this receiver. It performs remarkably, especially when one considers that its design is pre-WWII.

--

Greg Anders

"One doesn`t discover new lands without consenting to lose
sight of the shore for a very long time."

Andre Gide
French Novelist

anders@autopsy.corp.sgi.com
KG6YV

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: ARONGV@aol.com

Subject: Attn: WA1ABI
Message-ID: <961213105944_1589397458@emout17.mail.aol.com>

Got your message on needing a Globe Scout 680A manual. I have a free one, but your E-mail address was not valid.

See me at ARONGV@aol.com

Ron WZeroOIZ

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: jproc@bellglobal.com
Subject: BA Convention - Poll Results
Message-ID: <Chameleon.4.01.2.961213201526.jproc@>

Hello Firebottle Keepers,

I thought that I would hold off until Dec 24 to announce the results of the poll for those interested in attending the first ever BA convention (BAcon). There have been no replies for three days now, so I can only conclude that the membership has spoken. Had the replies continued to dribble in, I might have held off this announcement.

There were 10 people who said they would attend, one possible and two people offered to be guest speakers. This number is so far from being a 'critical mass' that it would simply not meet the level of synergy that I am seeking. Regretably, I have to announce that I cannot organize a convention with such a low number of responses.

I do wish to thank those people who responded and a few of you who offered some input. Perhaps there will be an opportunity in the future to organize a gathering of those wonderful folks who persue and preserve vacuum tube technology.

Regards,

Jerry Proc VE3FAB
E-mail: jproc@bellglobal.com
Radio Restoration Volunteer
HMCS Haida Naval Museum
Toronto, Ontario

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: BA should be used in lieu of /BA where possible, now.
Message-ID: <9612131846.AA110072@csemail.cropsci.ncsu.edu>

Dern it, jus when we thinks we is all set a fly stakes claim ta de ointment!

China (PRC) has just recently started issuing BA calls, according to a net news source. Can anyone confirm this?

Thus, technically, we should probably not be using the /BA but just the BA tailer on our calls:

```
  Don't use:      CQ BA CQ BA DE <yourcall> <yourcall>/BA K


  Rather, use:    CQ BA CQ BA DE <yourcall> <yourcall> BA K
```

The difference is minor, but it might keep the rabid DX hounds at bay thinking our yoopin' Hartleys are in Beijing rather than North America or Europe.

But can you imagine the fun of a new Chinese chops operating portable in the countryside calling:

```
   CQ BA CQ BA DE BA1BA BA1AA/BA BA K
```

Oh, well......

73/ZUT DE NA4G/Bob UP

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: jproc@bellglobal.com
Subject: RE: BA should be used in lieu of /BA where possible, now.
Message-ID: <Chameleon.4.01.2.961213130902.jproc@>

```
>  Don't use:      CQ BA CQ BA DE <yourcall> <yourcall>/BA K
>  Rather, use:    CQ BA CQ BA DE <yourcall> <yourcall> BA K
>
```

Bob,

```
Why not use:       CQ BAN CQ BAN DE <yourcall> <yourcall> K
```

```
BAN = BoatAnchors Net


By referring to an acronym, it will remove any confusion with the Peoples
Republic of China country prefix and only those in the group will know what
it means.


Regards,
-------------------------------------
Jerry Proc VE3FAB
E-mail: jproc@bellglobal.com
HMCS Haida Naval Museum
Toronto, Ontario
'Looking for a 'AN/SRC-501'
-------------------------------------




From boatanchors@theporch.com  Fri Dec 13 16:59:04 1996
From: Eugene Rippen <soundval@foothill.net>
Subject: BA's  FS  12/12
Message-ID: <32B19F9B.54F4@foothill.net>

For sale:

     Hammarlund  HQ 129-X.  Plays good.  Looks good.  Face of panel is a 9
     on a 10 scale. Cabinet is 7+.  Chassis is 6-7 in appearance.  Original
     Complete.  $120

     Hammarlund  HQ 140-X.  Plays good.  Looks very good.  Face of panel is
     a 9.  Cabinet is a 9.  Chassis is an 8.  Original. Complete.  $135.

     Hallicrafters  S-85.  Plays good.  Looks very good.  Face of panel is a 9.
     Cabinet is a 9.  Chassis is 9.  Hard to find one any nicer.   $110.

Add  packing and shipping.

Eugene Rippen, 105 Donnington, Auburn,  CA  95603



From boatanchors@theporch.com  Fri Dec 13 16:59:04 1996
From: djhutch@concentric.net
Subject: Brass re-plating
Message-ID: <32B1A186.3BF5@concentric.net>
```

I have an old Zenith Transoceanic I am attempting to restore to its' former glory. The brass seems to be completely worn off and therefore a simple cleaning won't do.

Does anyone know of a place that could restore the brass finish with a new coating? If a replating can be done, how expensive would this process be?

73's

Dave Hutchison KW9U

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Kevin McDonald <kevin.mcdonald@tivoli.com>
Subject: Re: Caps (Inspecting Varaible caps)
Message-ID: <32B1827A.432F@tivoli.com>

ARONGV@aol.com wrote:
>
> Helloooo
> Last three rigs I worked on had the same problem: capacitors.
> Yeah, sure, no big deal, right?

<snip>

> Well, I'm talking about the variable type.
> Next time you think you have done all your cap work, check
> those variables very closely.

Hmm... a similar problem with an NC-100XA (Well actually an RBH). The frequency was off by several KC on all bands, and I ended up fiddling with the dial pointer to get it in the ballpark. (i.e. bend) Several weeks later while cleaning the inside with Deoxit and swabs I noticed the main variable cap was shifted towards the back. Not enough to short the blades but enough to alter the capacitance quite a bit. Owing to Nationals reputation for mechanical excellence the main shaft is adjustable by loosening a lock nut at the back of the plate. After that I reset the pointer and frequency readout is about dead on.
I now do a basic mechanical inspection with my various radios when I have them apart. It is amazing how beat up a lot of these variables are. I have also noticed a lot of 'intentional' bending of blades - I assume to try to get the variable cap to match the readout markings on the dial.

Step 1: Mechanical inspection!

73, Merry Xmas, Kevin N5OJF

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: Re: Caps (Inspecting Varaible caps)
Message-ID: <19961213185002.AAD7918@LOCALNAME>

At 04:34 PM 12/13/96 +0000, you wrote:

>Hmm... a similar problem with an NC-100XA (Well actually an RBH).
>The frequency was off by several KC on all bands, and I ended
>up fiddling with the dial pointer to get it in the ballpark.
>(i.e. bend) Several weeks later while cleaning the inside with
>Deoxit and swabs I noticed the main variable cap was shifted
>towards the back. Not enough to short the blades but enough to
>alter the capacitance quite a bit. Owing to Nationals reputation
>for mechanical excellence the main shaft is adjustable by
>loosening a lock nut at the back of the plate. After that I
>reset the pointer and frequency readout is about dead on.
>I now do a basic mechanical inspection with my various radios
>when I have them apart. It is amazing how beat up a lot of
>these variables are. I have also noticed a lot of 'intentional'
>bending of blades - I assume to try to get the variable cap to
>match the readout markings on the dial.
>
>Step 1: Mechanical inspection!
>
>73, Merry Xmas, Kevin N5OJF
>

A NOTE HERE!!!!

The 'outer split rotor plates of a typical receiver or VFO tuning gang may be 'bent' in or out, sometimes rather crazily. Unless the plates are actually rubbing the stator sections or the frame, DO NOT alter them. This is especially important in high quality VFO's or receiver oscillator tuning gangs. A technique known as "knifing" the plates is done to make the oscillator frequency agree as closely as possible to the dial calibration. The procedure is very time consuming, tedious and can be very nerve racking. Be absolutely sure before you straighten out outer "bent plates" of a tuning condenser rotor!

This technique, by the way, is how we used to make the exciter/PA tuning caps "track" in the RT-178/ARC-27 UHF aircraft transceiver (2225-400 Mhz.) Most cheap receivers are not "knifed" as it adds considerably to the cost of manufacture, although nearly all the tuning gangs have segmented outer rotor plates.

73,
E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, repaired, traded and used!"
417 Ridgewood Drive,
Metairie, LA., 70001
ebjr@worldnet.att.net
Looking for: ELMAC PMR-7/PMR-12, Hallicrafters SR-75, 860 tubes

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: john <johnmb@pop.mindspring.com>
Subject: Caps, retoration....
Message-ID: <199612131648.QAA45510@mule0.mindspring.com>

>ARONGV@aol.com wrote:

>Step 1: Mechanical inspection!

Good advice! Also, this is the reason I always do the zen-like cleaning (slowly, carefully with q-tips, brushes and patience) before I do any electrical restoration work. A patient meticulous cleaning can make observation of things like this more likely, during the cleaning phase.
I normally HATE to wait, but some good things take time...

Best holiday wishes,

/John

John Brewer   AMI #24
WB5OAU/4 Clayton NC
Always looking for Lysco, and other
lesser known commercial ham gear
from the 30s-60s.

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Terry Burge <terrybu@netman.ENS.TEK.COM>
Subject: Christmas came early
Message-ID: <9612131706.AA14357@netman.ENS.TEK.COM>

Gang,

Your's truely was all smiles yesterday when I got home. My lady friend Mary had spotted an old speaker in a junk store and though she didn't think it looked like the ones in the magazines for HRO-50/60 variety I told her to get it anyway. All I knew was it had the National <NC> on it. Well, it turned out to be the match for my HRO-50T1 and NC-183D and HRO-60. I'd thought if I did find one it would cost and arm and leg but this one came home for a ten dollar bill. So Christmas came early at my place. Whoopie!

Sure looks nice next to the HRO.

Terry
KI7M

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: lkayser@rideau.net (Larry Kayser)
Subject: Clandestine/Spy radio identification, help pse
Message-ID: <199612131222.HAA17253@mail.peterboro.net>

I have found a B119 set in a museum near here, it is WW II vintage in appearance. I have looked extensively in reference material and never found any reference to this radio.

It has some similarities to the GRC-109/RS-1 in construction, but it is larger, older, and earlier design.

Any information at all will certainly be very much appreciated.

Larry
va3lk / wa3zia

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: Glenn Finerman <GFINER@nms.com>
Subject: Dan Nelson
Message-ID: <s2b10fdc.006@nms.com>

Spoke with Dan Nelson last night. He wanted me to let everyone know he DOES NOT have any testers for sale. He said at one time he had just a couple for sale, but those went quick and he normally doesn't sell them....just repair / restore. He also asked if I would inquire about any meter rebuilding services. Anybody know of a service that rebuilds meters?? I seem to remember seeing a post about it here.

Thanks Gang!............73......Glenn   N2BJG   gfiner@nms.com

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Conard Murray <ws4s@InfoAve.Net>
Subject: DuMont 246 manual
Message-ID: <2.2.32.19961213200717.006cdbe0@infoave.net>

Hi,
I have an original DuMont 256-D/E operating/maintenance manual and I need a TV-7 maintenance manual or a copy of one. I would like to swap if possible or just give it away for postage if that fails.
73 de Conard ws4s

```
.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.
. Conard Murray  WS4S    Glowbugs listowner .
.  217 Dyer Avenue        ws4s@infoave.net  .
.   Cookeville, TN  38501  615-526-4093     .
.    <><  Wise men still seek Him  <><      .
.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.-.
```

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Terry Burge <terrybu@netman.ENS.TEK.COM>
Subject: from rec.radio.swap
Message-ID: <9612131720.AA15138@netman.ENS.TEK.COM>

For your viewing pleasure...or at least your ears.
I spotted this on r.r.s. FWIW:

From: bgluck@monmouth.com (Barry Gluck)
Subject: National HRO-50T1 price*REDUCED*

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: jeffa@ix.netcom.com (Jeff Anderson)
Subject: FS: 470 uF / 450 V caps
Message-ID: <199612132359.PAA14808@dfw-ix10.ix.netcom.com>

I've a bunch of new 470 uF / 450 V caps (Rubycon MXR series, for example). Just right for that PA supply!

Lead style: Radial "Snap-In" (for PCB mounting).

Body Size: 2" high, 1.4" diameter.

Max Temp: 105 degrees C.

Price: $12 (domestic shipping included) for quantity 10.

Let me know if interested...

- Jeff, WA6AHL

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: Mike Maloney <ac5p@ionet.net>
Subject: FS: BC610I
Message-ID: <199612131346.HAA16921@mail.ionet.net>

Owner asked me to post this as he does not yet have E-mail. Please contact him direct for more info and tell him you heard about it via BOATANCHORS.

For Sale: Last version of BC-610 with sealed transformers. Missing speach amp and some tubes incl PA tube, otherwise complete w/PA and PS. Condx poor but could be restored or make good parts unit. Asking $125, pickup only at Oklahoma City. Approx. weight 400lbs. Contact Bob Graham-W5RXN @ (405) 525 3376.

I have not seen the item, please dont ask me questions about it. Contact owner direct.

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: jmiller@teleteam.net (Jay H. Miller)
Subject: FS: Johnson Viking/Ranger/Misc.
Message-ID: <v01540b00aed7351d0ef9@[199.34.24.9]>

POSTED TO THE BA LIST ON 12/13/96 AT 11:30AM CST
****

I have a Valiant and a Ranger that are currently in the "I need the room so these puppies have to go" department.

My Valiant is restored to 100%+ operating condition. All the tubes are 100%. All the caps are 100%. The entire output loading network was rebuilt (a very high failure rate for Valiants). The inside is so clean you could eat off of it. All connections are checked and resoldered. The VFO power resistor is new (relocated per the mods). All the light bulbs are new. The main cabinet was stripped and repainted and looks new. New power cord. The front panel is good (very slight wear on the MAN/PTT switch) but could be made factory new if I wanted to airbrush the leading edges with gray paint. I think if I did that the rig would rate an excellent on the CCA grading standards.

I have not made any modifications to the audio circuits (I have the ER info if anybody wants to do it later). I received very good signal reports when I used the rig and it worked just fine. K0BS and I talked on 20 meters almost every day for a couple of weeks. I never trusted the Johnson metering circuitry so I plugged in a VOM from the rear plug and made my initial tune-up and adjustments from that. I correlated the VOM meter reading to the panel meter and made note of the actual readings. Johnson used a weak shunt to sample the values and it never worked very well. I have a photocopy manual which lists documents all the work that I did including components replaced.

****

The Ranger has not been restored. It is missing the crystal cover (I do have a classis-plug replacement but I haven't found the knob and it is unpainted) and the rig needs one additional original knob. The rig does fire up and load. Needs a good going over and clean-up to bring it up to what I would call usable for my station. Others might just put it on the air. It is what I would call a fine candidate for cosmetic restoration. Probably take me a week or so to do it if I wanted to.

I've decided to stay all Collins and these two pieces are just excess and taking up valuable space. The YL gave me the Valiant last Christmas so it has some sentimental attachment but could be pried away by the right numbers.

Asking $450 for the Valiant, FOB Dallas, Texas.
Asking $200 for the Ranger, FOB Dallas, Texas.

Lets talk turkey.

Dallas area BA-ers who want to come over and see them, let me know. We can even fire 'em up into a dummy load or even work someone if you want--- just bring $$$! Hi. Hi.

Invader 2000 Power Supply
All the HV stuff you'll ever need. $100 takes it-- local pickup only. Don't ask me to ship it.

*********** ################### ***********
Jay H. Miller, KK5IM   Dallas, Texas
The Pocket Guide to Collins Amateur Radio Equipment
AMI#846   Collins Collectors Association
E-Mail: jmiller@teleteam.net
Visit My Home Page: http://www.teleteam.com/~jmiller/
*********** ################### ***********

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: bharris@scs.philips.com (Brian Harris)
Subject: FS: misc
Message-ID: <2b16f740@scs.philips.com>

The following items from a list I recently listed have sold:

SX-25
VHF-152
203-A
BC-1421

Thank you all that inquired.

Brian Harris - WA5UEK - The Cosmophone Collector
****
Wanted: Cosmophone, NC-400, PRO-310, 30J, any 30K type, KW-1, pre-war Collins
********* Cosmophone owners please contact me for registry   ******************
****

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: "Bob Duckworth" <wb4mnf@atl.org>
Subject: funky rectifier tubes, ARC58 schemo sought, HS vs SS in modern RX (better anywhere?)
Message-ID: <199612132344.SAA17720@atl.org>

I've got this old HB TX that has a pair of tubes in it that
have no readable numbers on them. They have 4 pins
on the base and are about the size of an 80 and have
a anode cap. They appear to have mercury in them.
The bases are loose and the plate caps are broken.
The anodes appear to be a bit burnt so I suspect they
may be a bit underated for the application.
I'm gonna use some SS to get the thing going but am
curious as to what these HS parts may be and if they
are hefty enough, keep an eye out for some more.

Any ideas? I looked in an old handbook at the rectifier
tubes but couldn't find anything that looked like these.

Also looking for a schhematic of ARC58. Got one here
that's very pretty but no control head or cables.

Last for today, for the engineers. If I were doing a receiver
from scratch, is there any place where a HS device is

going to be superior to SS?

-bob
wb4mnf

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: BEN NOCK <106312.1035@compuserve.com>
Subject: German/Italian/Japanese gear
Message-ID: <199612131456_MC1-D05-4D75@compuserve.com>

RE: this BA message:-
==
Greetings BA Gang,
Anyone needing help with identification, restoration, or finding a home
for German, Italian, Japanese or other WWII vintage BA's contact: Bob
Graham-W5RXN @ (405) 525- 3376, leave name/no. on recorder
w/time to call back. He does not yet have E-Mail.
He does have good knowledge about such gear. 73/Mike ac5p

--reply-------------------------

If you need any info, get in touch with me. I do have E-mail, and lots of
gen on all these sets and more. Also, I have Japanese to
English translation facilities, for those little special bits.

Guten tag, chow and sianara

Also, a good home given to any foreign set knocking at my door.
Lets keep it in the family.

Ben G4BXD

MILITARY WIRELESS IN THE MIDLANDS

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: Mike Maloney <ac5p@ionet.net>
Subject: Help with Foreign BA's
Message-ID: <199612131346.HAA16914@mail.ionet.net>

Greetings BA Gang,

Anyone needing help with identification, restoration, or finding a home for
German, Italian, Japanese or other WWII vintage BA's contact: Bob
Graham-W5RXN @ (405) 525-
3376, leave name/no. on recorder w/time to call back. He does not yet have

E-Mail.
He does have good knowledge about such gear. 73/Mike ac5p

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: MEC <danmec@inet.uni-c.dk>
Subject: Re: Help with Foreign BA's
Message-ID: <Pine.3.89.9612131634.A4610-0100000@inet.uni-c.dk>

> Anyone needing help with identification, restoration, or finding a home for
> German, Italian, Japanese or other WWII vintage BA's contact: Bob
> Graham-W5RXN @ (405) 525-
> 3376, leave name/no. on recorder w/time to call back. He does not yet have
> E-Mail.
> He does have good knowledge about such gear. 73/Mike ac5p

He i s nice fellow to talk with on the phone and knows something about it,
but he never answers letters, unfortuntely.

I can help with info on German WW2 gear and to some extent also British
stuff.

73 Rag OZ8RO

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Chuck Penson <penson@sci.mus.mn.us>
Subject: Help! Making a speech!
Message-ID: <32B1BA37.2326@sci.mus.mn.us>

Gang,

I know this may be just a little off-topic, but I need your input, so please indulge me just this once.

I have been asked to speak at the St.Paul Radio Club's annual banquet. One of the requests they had is that my program should somehow engage both hams *and* their spouses. Hmmm.

After having thought about it for a while my basic plan is to address the trials and tribulations of living with a ham, and especially living with a ham who collects. I think we all understand that we collectors present special challenges to our non-ham XYLs or women friends, and that those challenges are often amusing (at least in retrospect). To begin the program I want to use a Letterman-like quiz. For example:

"The greatest challenge a collector faces at a fleamarket is:

(A) Arriving early enough to get the best deals.
(B) Being burned by an unscrupulous seller.
(C) Persuading his wife to watch his table while he hunts around.

In more general terms, hams may present a variety of other challenges.

"When planning a route for a vacation it is best to:

(A) Consult a map for the most direct route.
(B) Take the most scenic highways.
(C) Take the route that includes the most hamfests.

You get the idea. Any suggestions?

Thanks and seasons greetings!

--
Chuck Penson
WA7ZZE

penson@sci.mus.mn.us
612.221.4510 voice
612.224.5092 fax
http://comped.sci.mus.mn.us

Standard Disclaimer: The opinions expressed are etc. etc. ...

"Nothing is too wonderful to be true" -- Michael Faraday

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: oranges@FRB.GOV
Subject: Hollow State News is still in print
Message-ID: <2b1b7140@cclink.frb.gov>

Hello BA'ers

Yes, Hollow State News is in print,
Ralph Sanserino publishes it and sent the costs
4 issues for $5.00
Back issues are $1.00 each
The index is $1.00
The current issue is #39

Ralph's address is

Ralph Sanserino
PO Box 1831

Perris CA 92572-1831

His Email is 74041.2430@compuserve.com

A thanks to everyone who help me.
Ralph Sanserino
John Kolb
Rick Robinson
Ben Hall
Jim Carrington
Dave, W3BJZ

Happy Friday the 13th

Fred Bohner Arlington,VA

Email address is oranges@frb.gov
MESSAGE FOR PERSONAL USE NOT OFFICIAL USE

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Peter Heimbach <karl@tyrell.net>
Subject: How to cure a Swan drifty 350???
Message-ID: <Pine.SUN.3.91.961213150254.29521A-100000@tyrell.net>

Last October, I picked up an average looking Swan 350 and after a bit of tinkering and replacing a component or two, got the thing working again.

All is well except it seems to have an inordinate amount of drift. Even after an hours warmup, it never really settles down.

I've been told that this particular radio is infamous for this. Surely, someone has come up with and improvement?

Are there any Swan gurus that can give me a hand with taming this beast?

Tnx ... de Karl - W5QJ

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: bharris@scs.philips.com (Brian Harris)
Subject: Items sold
Message-ID: <2b17f670@scs.philips.com>

The QSTs, military bulletin and Central Electronics 10A have sold. Thanks to all that replied.

Brian WA5UEK

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: "Lawrence R. Ware" <lrware@pipeline.com>
Subject: Larry's sixth day of Christmas
Message-ID: <1.5.4.16.19961213072445.28ffb35e@pop.pipeline.com>

Good evening BA fans:
It's time for "Larry's sixth day of
Christmas," part six of a 12 part giveaway between now and Christmas.

So without further ado...
Welcome to Larry's "Sixth Day of Christmas" free stuff giveaway.
Tonight for your perusal, the following items are available
free to good BA homes. You get to pay the shipping.

Lot One:
Sets of dress washers for rack handles. These are the nice little
washer fittings that go on the base of the handles on your
rack mount equipment. (R390, etc.) Have two sets in black
aluminum and two sets in polished steel. (four to a set, + one
spare.)

Lot two:
Brand new Lacquer-Stik(s) in white only. I bought an entire box
of the darn things, so I have 11 to give away.

Thats going to do it for now, Keep your eyes open for parts
Six to twelve as we march towards the Christmas season...
Hey, it sure beats throwing this stuff out! <grin>

Winners will be determined by:
1) Tell me why you need/want them, points awarded for:
  a) Repairing or building a firebottle rig.
  b) Needing them to complete a project.
  c) Looking for someone your "Elmer-ing"
  d) *Making up an outrageous story of what you will use them for. :-)
        * For item "d" the taller and more unbelievable the better...
Storys about flat earth's, Phrenology, Ralph Nader, or how Phrenology, proves
Nader has a flat head, are always good for extra points.

2) Bonus points to anyone who has sent me a manual, helped
me find a part, or provided advice, (good or bad, it's the effort that
counts. :-) or sold me something at a reasonable price.

3) Double bonus points to anyone who has posted thoughtful technical
comments to one of the lists recently. I'm not that thoughtful

a person myself, but I learn a lot from reading.. :-)

Winners will be determined any darn way I feel like.
Judges decision is final. (Although open to bribes :-)

-Larry

# Larry's Home for Wayward Test Equipment & Old Radios (tm)
# Let your test equipment retire in sunny central Florida.
# Intensive Care, Private Bench Space, Frequent Use,
# Factory trained HP, Tek. & Fluke Surgeon on staff.
# Good Home Guaranteed or double your junk back!
# lrware@pipeline.com   - Orlando, Florida -

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: ARONGV@aol.com
Subject: Megahertz Electronics???
Message-ID: <961213162146_809376826@emout04.mail.aol.com>

Help:

Someone left a message for me about where I could find some 8236 tubes. The reference was to a company called Megahertz Electronics.

Unfortunately, I must have copied down the E-mail address off by one number somehwere.

I reckon I must have "Oldtimers Disease"....or something.

Ron WZeroOIZ

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: arc5@ix.netcom.com (David Stinson)
Subject: Military fans: What's in *your* collection?
Message-ID: <199612131907.LAA08334@dfw-ix12.ix.netcom.com>

My wonderful XYL and three babies are off to see grandma for a few days, so I'm finally going to get 5 minutes to do some radio stuff, mail off packages, etc. Hurrah! Anyhow...I've been meaning to ask this of the group for ages but never gotten to it...

Fellow Keepers of the Firey Iron, Military style:
I'm trying to compile a list of "who's got what" so that we can all put our collective heads together on any particular

problem. It's not about listing the stuff that's been moldering in your garage forever. You should swap that off to someone. This is about the radios and systems you've actually gotten or are attempting to get on the air.

For example, if we know whom has had an ART-13 cooking, we can direct questions to those talented folks and help each other out. We could list wheither you did it "original" or with "ham" mods, if you have the complete set (majority of the accessories, shock mounts, etc.) or are missing major some parts, or is a "project" (meaning you're actually working on it, not "going to get around to it").

I'd suggest the following table format. You can "cut and paste" the table header:

TYPE UNIT or SYSTEM	ORIGINAL or MODIFIED	COMPLETE or INCOMPLETE	WORKING or PROJECT
AN/ARC-8 (ART-18/BC-348)	ORIG	COMPLETE	WORKING
AN/ARC-5	MODIFIED	INCOMPLETE	WORKING
BC-610I	ORIGINAL	INCOMPLETE (Need Modulation xfmr)	PROJECT

I won't list mine first since everyone knows I'm crazy and foolish with money. Besides, Mike Hanz and Ray Mote would show me up so bad...heh heh.
Even if your collection consists of one working, modified TCS receiver, your knowledge has value. So what do you think, Military folks?

73 DE Dave Stinson AB5S
arc5@ix.netcom.com

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: wb6zwc@ns.net
Subject: Re: Military fans: What's in *your* collection?
Message-ID: <199612132030.MAA29207@eagle.ns.net>

WHY JUST MILITARY STUFF?

At 01:08 PM 12/13/96 -0600, you wrote:

```
>For example, if we know whom has had an ART-13 cooking,
>we can direct questions to those talented folks and help each
>other out.  We could list wheither you did it "original" or
>with "ham" mods, if you have the complete set (majority of
>the accessories, shock mounts, etc.) or are missing major
>some parts, or is a "project" (meaning you're actually
>working on it, not "going to get around to it").
>
>I'd suggest the following table format.  You can "cut and paste"
>the table header:
>
>TYPE UNIT          ORIGINAL          COMPLETE        WORKING
>or SYSTEM        or MODIFIED     or INCOMPLETE    or PROJECT
>-----------------------------------------------------------------
>AN/ARC-8
>(ART-18/BC-348)      ORIG            COMPLETE        WORKING
>
>AN/ARC-5            MODIFIED         INCOMPLETE      WORKING
>
>BC-610I             ORIGINAL         INCOMPLETE      PROJECT
>                                (Need Modulation xfmr)
>
>I won't list mine first since everyone knows I'm crazy and
>foolish with money.  Besides, Mike Hanz and Ray Mote would
>show me up so bad...heh heh.
>Even if your collection consists of one working, modified TCS receiver,
>your knowledge has value.  So what do you think, Military folks?
>
>73 DE Dave Stinson AB5S
>      arc5@ix.netcom.com
>
>
>
Richard@Sacramento



From boatanchors@theporch.com  Fri Dec 13 16:59:04 1996
From: jproc@bellglobal.com
Subject: More Reference Files
Message-ID: <Chameleon.4.01.2.961213172913.jproc@>

Dear BA'ers,

I have posted four more reference files to the archives.

1) A reference to available Hammond filament transformers.
2) A historical radio message sent on V-E day.
```

3) The last CW message sent by the Royal Canadian Navy.
4) The last CW message sent by USGC station NMN.

To receive all of four files, send an E-mail to: listproc@theporch.com
In the body of the message, ONLY type:

```
get boatanchors hammond.filament.transformers
get boatanchors ve-day.message
get boatanchors rcn.last.cw.message
get boatanchors uscg.final.message
```

Regards,

Jerry Proc VE3FAB
E-mail: jproc@bellglobal.com
HMCS Haida Naval Museum
Toronto, Ontario
'Looking for a 'AN/SRC-501'

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: km1h@juno.com
Subject: Re: Need info on FAA Modulator
Message-ID: <19961213.175003.7119.10.km1h@juno.com>

I may have the RF portion of that system.
It was made for the FAA and uses a pair of 4-125A's in a tuned line amp in the AM 136 MHz Airband. All labels are missing and it was slightly modified for 2M before I wound up with it. The only ID is a few FAA rubber stamp marks on the rear of the chassis.

I wonder if this (the amp) was the predecessor of the AM-6154 now so popular on 2M.

Perhaps other BAers can shed more light

73..........Carl

On Wed, 11 Dec 1996 18:14:00 -0600 (CST) owens@stout.atd.ucar.edu (Chip Owens) writes:
>I picked up a pair of units surplus to FAA. They are an AM
>modulator and the driver chassis. The modulator uses 811's and

```
>has a built in 1,000 volt power supply. It weighs about 100lbs.
>The driver chassis uses 6B4G's to drive the modulator and has
>it's own built-in AC supply. The info from the ID plates is
>listed below. Does anyone have schematic or complete manual for
>these units. Anyone know what the rest of the system was?
>
>Thanks,
>Chip Owens, NW0O
>
>
>Carrier Modulator Driver Unit       Carrier Modulator Unit
>    made for               made for
>Department of Commerce          Department of Commerce
>civil aeronautics administration    civil aeronautics
>administration
>Type CA-1234  Contract CCA 25096    Type CA-1235  Contract CCA
>25096
>    serial no. 533                  serial no. 532
>Hoffman Radio Corp.             Hoffman Radio Corp.
>Los Angeles, Calif.             Los Angeles, Calif.
>
>


From boatanchors@theporch.com  Fri Dec 13 16:59:04 1996
From: arc5@ix.netcom.com (David Stinson )
Subject: PLUG-IN FILTER CAPS
Message-ID: <199612131922.LAA24641@dfw-ix5.ix.netcom.com>

I had an absolute flood of people who were interested in
those octal plugin filter caps.  Whew.

Tell you what...I will contact the fellow at the next
Vegas meet, which is in a couple of weeks or so.  I'll buy
up his whole stock, and that should get at least one or
two to everyone who wrote.

73 DE Dave Stinson AB5S
      arc5@ix.netcom.com




From boatanchors@theporch.com  Fri Dec 13 10:31:39 1996
From: FRANKK6NL@aol.com
Subject: Proximity fuse tubes
Message-ID: <961213020440_235219463@emout13.mail.aol.com>

SM0AOM asked a question about fuse tubes.<Does anybody in this group know
```

some details about the *extremely* rugged
vacuum tube techology used in these early CW radar proximity fuses?

Especially in which ways the internal tube structures were prevented
from collapsing from inertial and centripetal forces
when an anti-aircraft gun was fired.>

Interestingly enough these tubes were adapted versions of Raytheon' s
Hearing Aid tubes which had been developed and manufactured in the the late
thirties.The major improvement needed to withstand the 20000 G forces
involved was the filament support system . Raytheon contributed to this with
what was known as the mousetrap support because it involved a spring system
like those in mouse traps.
.Otherwise the tubes were not substantially different from those used in
Hearing Aids. Sylvania was the major manufacturer and produced millions
during the WW2 and added additional improvements as well. The subminiature
types often mentioned on BA are very much the same tubes.

During the war I only saw proximity fused shells fired in anger. Something
like 40 percent of the shells exploded permaturely as soon as they armed
which fortunately was at a good distance from the gun that fired them. After
the war I was involved in a Raytheon program with NBS to further improve
performance in rockets.

There is a splendid very detailed article in the most recent issue of the
Quarter Century Wireless Association Journal which tells all about the
proximity fused shells and how they operate. It is complete with circuit and
pictures of the layout that was tucked into the nose of the shell. I
recommend it to all. There is far more in it than I was allowed to know
during that NBS program.But times change.

Frank K6NL

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Randy Zelick <h2rz@odin.cc.pdx.edu>
Subject: R-390(non-A)
Message-ID: <Pine.PTX.3.91.961213102109.7257B-100000@odin.cc.pdx.edu>

Well the talk about R-390's caused me to unbury my project set, and this
refreshed my memory of a minor but unsolved problem:

This 390 has the mechanical digital counter mod for the BFO. Pretty ugly,
but a nice feature. I'm embarrassed to say that I can't figure out how to
get the sucker off the front panel (it and the panel need a good
cleaning). Either there is a trick or mine is just really stuck. Anyone

been down that road?

I should also mention some additional attractions of the R-390 relative to the -A:

1. Better sounding audio
2. No chance of zapping a mechanical filter with cap failure
3. Option of stagger tuning I.F. to custom-tailor bandwidths
4. BNC connectors between modules make servicing and cable replacement a lot easier
5. Less variation between sets because fewer contractors (almost all are Collins or Motorola) with the average construction quality higher than the average for the -A
6. Three audio filter settings instead of just two

=Randy=

R. Zelick
Dept. Biology
Portland State University
P.O. Box 751
Portland, OR 97207
503-725-3086, 503-725-3888 (fax)

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Dave Metz <metzd@cfw.com>
Subject: R390 users list--Addendum
Message-ID: <2.2.32.19961214015657.00705490@milo.cfw.com>

For those of you keeping my previous post, the following two units should be added to the list for a new total of 25 units plus another 391.

DArney@gnn.com (Dan Arney)	1 make -not indicated

R391 autotune version:

Dean Davidson <ddavidso@metz.une.edu.au>	1- Collins unit

Remember that Tom, N5OFF, has posted the serial number/contracts in the BA archives for those of you who really want to get into that kind of detail.

I cannot find my copy of the final engineering report from Collins (must be buried under something important for more than a year). For those of you who have never seen this report and are in love with the 390's or the A's, I would highly recommend that you get a copy from perhaps someone on the group. Volunteers??? I recall that it is maybe 60-80 pages and interesting reading to follow the development of the receiver from concept to prototype and the cost cutting recommendations for the 390A. I got the impression Art Collins told the Signal Corps what he could do before he checked with his engineering staff. Just looking at those cam profiles and realizing that those gears are an analog computer working out inductance equations, my question is how did they do that without computers? (Talk about Calculus with a capital 'C') I'm sure Hank will have some sharp words for me with that statement. Simply put, I am in awe of these engineering marvels and the people who made it work. Sorry for the bandwidth but if you haven't ever seen this report, its a must --just like the 35 manual.

73's dave

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: Karl-Arne =?ISO-8859-1?Q?Markstr=F6m_08?= 6017171
Subject: Re: Re: Tube life
Message-ID: <A77IPQ2CG1B*/R=A1/R=MRGST/U=KAM/@MHS.stoa.mobitel.telia.se>

ªAlso, one time, I was chatting to a fella who worked at one of those
ªcoastal statiions. He told me if you have any control over the
ªtransmitter filament voltage, to turn it down until the power started
ªto drop off. Your filaments would last forever.
ª
ª73 Jim
ª
ª

This is a basically true statement,but with a few cautions.

Firstly it only works as intended with direct-heating pure tungsten or thoriated-tungsten
cathodes. I'm young enough to just have read about pure tungsten emitters, so I have no
real experience of these.

In an Eimac application note from the 70's, a method is outlined, where a relation between peak plate current and filament power was established, and the possibility for decreasing filament power calculated.

Filament voltage is then reduced in small steps from the rated value to the point just before output power starts to drop, but not more than -5%.

The reason for not getting below 95 % voltage is mainly the risk of losing gettering action by running the filament too cold, and thereby contaminating it from residual ions in the envelope.

I can attest to the effectiveness of this method, by applying it,
4CX5000A tube life in air-ground SSB transmitter applications
was approximately doubled by running the filaments on 7.2 V instead of 7.5 V.

Another aspect of power tube life is, as discussed previously, is the limitation of in-rush
filament current. Some transmitter manufacturers have gone to great lengths in this
aspect, I have seen magnetic amplifier regulated, current-limited AC filament supplies,
use of series choke voltage regulation (essentially a constant-current approach),
and servo-controlled Variacs, which were slowly run-up from zero
when filament power was applied.

It also appears that, using quality tubes,power tube life can be very long.
The same pairs of Eimac 450TL's have been used in the PA and modulator of a Wilcox 99 500 kHz
MCW transmitter in daily use at Stockholm Radio for the last 20 years, according to an older colleague,
and I remember reading about a NDB beacon in Scotland that was taken out of service in the mid-80's
still having the same 807's operating that was delivered with the equipment in 1950.

Not to speak about the special long-life tubes designed for carrier telephony multiplex service in the 30's.
I have been told about carrier transmission systems that were installed in the early 30's, which became
scrapped in the late 60's with most of the original tubes still installed.

73/
Karl-Arne Markstrom
SM0AOM

kam@stoa.mobitel.telia.se

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: lkayser@rideau.net (Larry Kayser)
Subject: Signal Quality es 3 Phase HUM!!!!
Message-ID: <199612131306.IAA17513@mail.peterboro.net>

Rag:

>Why is everybody giving the East-Europeans T9 report when they definately
>are T5-T7 ?

I had access to a lot of Silver Mica caps, NPO etc over the years, send a lot of small packages into eastern europe and the old USSR. I have some rather priceless letters from the chaps I sent them to.

One time I ran into a box of Mr. C's 3.1 Kc Mechanical Filters and carrier crystals, sent quite a few of those off as well. One guy sent me some pictures of the rig he built, it was a master craftsmans piece of art. I worked him later and he really had a nice sounding station. I was amazed at the quantity of test equipment they had access to, not modern stuff but good basic stuff like excellent RF voltmeters etc.

>We never get them to clean up their TX's unless we all start giving them
>something closer to a correct report.
>Some of the Russian and Ukrainians are ruining 10 kHz of the band
>sometime with keyclicks, chirp,spurious etc !

I agree this is a problem, like some of the Cubans over here, I sense that many of the reports of "599" are either as a kindness or without any thought behind the message.......

>I have suggested to K3EST that the CQ WW should have a penalty for lousy
>signals. When they fire up their 10KW amplifiers after a poor old military
>transmitters it is no fun on f.ex 40,80 and 160 here.

I have listened to some of these stations in some of the voice contests, the three phase hum on a few of them is very loud. But then I am no angel myself, as several times over the years I got on the air from strange places with some awfully big equipment, usually tried to check it out for quality or at least looked at the RF signal with a scope before I opened up...

Larry
va3lk / wa3zia

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: mirage!pamars@uucp-1.csn.net (P.A.Marshall)
Subject: RE: Silver Plating
Message-ID: <9612140146.AA18454@mirage>

Barry L. Ornitz writes:
>
> With bright, shiny copper, almost any soluble silver solution will produce
> a thin silver coating. Spent photographic developer has been used by
> some. Just remember that silver nitrate (about the only commonly

> available soluble silver salt) is corrosive, poisonous, and makes your
> hands black [and it does NOT wash off]. To make matters worse, you
> probably won't realize you have splashed drops of the solution on you
> until they begin to blacken and by then it is too late! :-)
>

Barry, I think spent (really just used, it does not have to be totaly spent, just "loaded") photo fix is the solution to use for this, the fixer removes all the unconverted silver salts from the emulsion base. With fixer your hands will not turn black (But they will stink a bit), I beleave the major componet is sodium thiosulfate(sp?) (hypo), though some boric acid and an alum (and other stuff I'm sure) is added to harden the gelatin. I am under the impression that this stuff offers limited hazards to users, but then I'm not a chemist either. I have often plated small copper objects this way, I have found that it helps to lightly rub the surface to be plated while it is in the solution, this seems to produce a more even result. It is also very possable to electro plate using fixer, the current must be limited to a low value or you will have a dark and uneven plating.

```
Al Marshall      "Real Radios Glow in the Dark"       almarshall@acm.org
1+219.665.5072        Mirage Computers, Inc.     pamars@mirage.angola.in.us
```

"The lyf so short, the craft so long to lerne." - Chaucer

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: mashaum@fcg.net (Mark Shaum)
Subject: Simplified BA CW net procedures
Message-ID: <M.121396.091607.62@NE9G>

Bob, NA4G recently posted a nice note on the style and procedures used on the 40/80/160 meter BA CW net nightly gatherings. While formality is admirable, and even stylish on CW, it isn't always required.

Case in point.. earlier this week I had been monitoring 3579.5 and 1802 as usual in the early evening hours. Not hearing much, I keyed up the 32V3 on 3579.5 and offered:

"HEY BA DE K9TR/BA K"

Which brought an immediate reply from Carl, K8NU. Who sez us BA ops are high strung? <grin>.

Last nite, after a few unanswered CQ BA's on 1802, a feller popped in to ask what country the BA prefix was from..

73, and happy holidays, folks! - Mark, K9TR/BA
Lets have more BA CW on 1802 kc!

Mark Shaum, K9TR
mashaum@fcg.net

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: Step-Start (was Re: Tube Life)
Message-ID: <Pine.ULT.3.95.961212234628.20352B-100000@admin.aurora.edu>

In my modified Johnson Desk Kilowatt, I added inrush protection by installing a 50 ohm resistor in series with the primary of the filament transformer. 5 seconds after power is applied, a Amperite thermal relay operates. It in turn operates a DPDT relay. One set of its contacts shorts the resistor, applying full line voltage to the filaments, and the other set of contacts both latches the relay operated and disconnects the thermal unit so it's not sitting there giving off heat. That also guarantees that if there is a power interruption, the process starts over again.

This circuit then operates similar thermal relay/regular relay combinations in the plate circuit. (slightly longer delay to insure fully heated filaments before plate supply can operate). So if I want to, I can just flip one switch on, and all the rest of the power sequences on in orderly fashion.

E-mail broehrig@admin.aurora.edu   73 de Bob, K9EUI
CIS: Data / Telecom   Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Richard Hager <rhager@millcomm.com>
Subject: Re: Step-Start (was Re: Tube Life)
Message-ID: <32B203E1.1A11@millcomm.com>

Bob Roehrig wrote:
>

> In my modified Johnson Desk Kilowatt, I added inrush protection by
> installing a 50 ohm resistor in series with the primary of the
> filament transformer. 5 seconds after power is applied, a Amperite
> thermal relay operates. It in turn operates a DPDT relay.

> One set of its contacts shorts the resistor, applying full line
> voltage to the filaments,

Ouch!! That'll warm that tube up right quick!

hee hee. Sorry Bob, couldn't resist...

--

Richard Hager

+ Ah-ha! Design Group, Inc.   -
+ Precision CNC Technology, since 1991 -
+ 612-641-1797, Fax: 612-641-8681   -
+ "I just like to make things" So...   -
+ please call Ah-ha! directly for CNC info   -
+ http://www.gdic.com/ahha email: ahha@gdic.com -

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: John Shriver <jas@shiva.com>
Subject: Re: Sylvania 1N71, Whatizit
Message-ID: <9612131754.AA13046@kane>

>From Sylvania tube book:

1N71, Low Impedance Varistor (4 units), -50 to +75 deg C, 40V reverse working voltage, 200mA recurrent peak forward current, 60mA average forward current, 1000mA 1 second surge current, 40V peak reverse voltage, 15mA (min.) forward current at +1V, 300uA (max.) reverse current at -30V.

Good luck.

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: ARONGV@aol.com
Subject: There's More To Caps
Message-ID: <961213011837_775684968@emout01.mail.aol.com>

Helloooo

Last three rigs I worked on had the same problem: capacitors. Yeah, sure, no big deal, right?

Well, I'm talking about the variable type. Got a Valiant in and after wanting to slit my throat, I discovered the stator and rotor blades were touching in the buffer tuning circuit.

Next came a Ranger with the fuses in the plug wired over. The power transformer was burned to a crisp. The culprit: you guessed it, the buffer cap.

Now that should be the end to this Cap saga...but...

Put two Globe Scout Deluxe xmtrs on my bench to wring them out. well, at least this time the bad, shorting variables were in the Pi network. In this case, it turns out that they were just terribly cheap caps. Being suspicious by now, I took a closer look at the final tank caps and guess what I found...

Ron WZeroOIZ ARONGV@aol.com

Next time you think you have done all your cap work, check those variables very closely.

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: km1h@juno.com
Subject: Re: Troubleshooting IF Cans??'s
Message-ID: <19961213.175003.7119.12.km1h@juno.com>

On Wed, 11 Dec 1996 22:38:19 -0600 (CST) vancleef@netcom.com (Henry van Cleef) writes:
>As Dave Metz discourses

>No sweat. Indeed, rigging up methods for in-circuit testing of tuned
>circuits is one of the more intriguing creative activities.
>
>Problem with 455 Khz. IF's is that the good grid dips don't go down
>that low, nor does the trusty Boonton 250A RX bridge. If you are
>working with higher frequencies, start with your grid dip (you DO have
>a grid dip in a ham shack, don't you?).

Hmmmm, I have a problem with that statement. Perhaps he meant cheap grid dips....not good.

Two excellent companies produced classic GDO's that covered 455 KHz and even well below.
The Millen 90651 and 90662 both covered that range with the 46704 coil.

The other that I am familiar with is the Measurements Corp Model 59 with the 59LF head and appropriate coil.

I happen to own both the 90662 and the 59LF. The Model 59 came from National Radio. Both GDO's show up at flea markets, etc. Not often, and usually not cheap, but are quickly snapped up by serious individuals.

There may be other "good" models available. I remember one that I used in the Navy that also went low in frequency but forget the model.

>
>For LF coils, get out your trusty HP 200 CD audio oscillator, and make
>your own Q meter. Add a bunch of resistance to the output leads (you
>can experiment to get results), and hang a voltmeter across the coil
>leads. If's are almost always open-circuit with power off, so some
>clip leads will get you to it fairly easily. Tune up your 200CD and
>watch for the peak. You should see about identical peaks from all the
>IF coils. Yes, there is a way to derive Q from the peak-valley ratio,
>but it isn't direct---big errors with this setup. Nonetheless, you
>can tell whether you've got a peak, or need to pull the transformer
>out and investigate.

Well, Im sure that we all own a HP200 CD but the original query was how to trouble shoot with only basic equipment; ie. Sig Gen, scope and a multimeter. I see that my   "friend" goes on and on about using anything but.
I am just a lowly tech with 40 years experience that spent many years repairing equipment (still do). I cannot profess a college degree but for many years my job was to correct "The Engineers" mistakes and get the circuit working AND reproducable so that it could actually be manufactured. In 1996 vernacular it may be called "street smarts".

Anyway here are a few "by the seat of your pants" ideas that certainly will not be found in the Proceedings of the IRE-IEEE, etc.

Equipment is a sig gen capable of 455 KHz of any parentage or price range. The AN/URM-25D is one that comes to mind at a very reasonable price.
Next is a VTVM or a basic VOM. A factory RF Probe would be nice but at

455KHz anything will work. We are not looking for a measurement; just a meter indication. Any Handbook RF probe ckt will work.

Couple the Sig Gen into the primary of the IF can (you can leave the tube in place or use a socket pin to inject the signal) thru a 1000pf capacitor. Attach the meter to the high end of the secondary or remove the tube and use the grid socket pin (or grid cap) to stick the probe into. You need a RF probe/ detector for this step.

Tune the genny to 455KHz (listen on a RiceBox RX or whatever if youre not sure of calibration). You can also hook to the antenna terminals of another RX with a 455KHz IF and force the signal thru the RF/Mixer stages with enough signal. Anyway, you want to be certain of your genny frequency.

Without changing the genny frequency crank up the output level until you see (hopefully) a meter indication (on the lowest DC V scale). If the IF xfmr is OK you should be able to tune the trimmers and see a peak. If no indication at all or no tuning indication , it is probably time to pull the can.

There are numerous variants to this theme that can be tried individually or in concert:

- Step up the genny impedence with a 9:1 toroid balun to get better injection. Certainly still far from ideal impedence matching but every lil bit can help at times.
- Leave power on and put the meter (VTVM only) on the IF AGC line and look for an indication.
- If even a VOM is not available you can make a real basic indicator with a 200 ua CB S meter (the more sensitive the better), a 1N34 diode and a 1 meg resistor and use as a hard wired FS Meter.

Creativity is the key here; use whatever works. I always use the 1000pf in series with the genny lead just in case I do something stupid.....like turn the RX power on! The above is applicable to any radio with proper caveats. I have used on a 175KHz IF RAS, numerous 262KHz auto radio IF's, etc. over the years.

None of the above ideas are unique, I learned many from old Navy Chiefs and later techs at National many years my senior. I am sure that other techs can add many more suggestions.

I apologize for any typos and glaring omissions. This was written on a single pass as Im still over 300 msgs back after the 4 1/2 days without commercial AC power; just a benefit of rural living!

73......Carl

>This method is also handy for finding inductance of AF iron stuff.
>Just pick a suitable cap to resonate it with, and resonate it with the
>audio oscillator. The old Q-meter formula, L=25330/(F^^2*C) will give
>you the inductance.
>
>This "resonance" check is also a sure shot check for shorted turns
>other funnies. If you've got a leaky cap or a shorted turn, you won't
>get much (if any) resonance peak.
>
>
>
>
>
>
>
>--
>==
>Hank van Cleef
>E-mail vancleef@netcom.com or vancleef@tmn.com
>==
>
>

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: "Terry L. Dobler" <kj7f@micron.net>
Subject: Re: Troubleshooting IF Cans??'s
Message-ID: <2.2.32.19961213233830.002e80e4@pophost.micron.net>

At 04:58 PM 12/13/96 -0600, Carl wrote:

>Tune the genny to 455KHz (listen on a RiceBox RX or whatever if youre not
>sure of calibration). You can also hook to the antenna terminals of
>another RX with a 455KHz IF and force the signal thru the RF/Mixer
>stages with enough signal. Anyway, you want to be certain of your genny
>frequency.

>73......Carl

Make sure the radio is in the SSB mode.   My Kenwood offsets the
carrier in CW receive 800 Hz (selectable via menu).   Thus the dial
reads the true frequency when the tone is 800 Hz rather than zero

beat.   Radio also doesn't have an onboard calibrator so unless you read the manual you wouldn't catch it.   Could really mess up an IF alignment.

Terry KJ7F

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: "Lawrence R. Ware" <lrware@pipeline.com>
Subject: Re: Troubleshooting IF Cans??'s
Message-ID: <1.5.4.16.19961213192844.29af966e@pop.pipeline.com>

Hummm, some thoughts added, some others removed for space...
What follows is IMHO...

Hank wrote:
>>get out your trusty HP 200 CD audio oscillator, and make
>>your own Q meter.
>>Add a bunch of resistance to the output leads
<snip>

km1h@juno.com wrote:
>Couple the Sig Gen into the primary of the IF can (you can leave the
>tube in place or use a socket pin to inject the signal) thru a 1000pf
>capacitor.
<snip>
>-   Step up the genny impedence with a 9:1 toroid
>balun to get better injection. Certainly still far from ideal

Without getting into all the fine details of driving point impedance(s) (This poor old digital engineer has been doing some studying, might even have this right! :-)
Hank mentioned a point (without explaining it)
that Carl has glossed over... to wit:

The idea behind adding resistors between the sig source and the DUT (device under test) allows the sig gen to function as a zero impedance voltage source (to the rest of the circuit) and allows for impedance matching with the primary of the IF transformer. This becomes important if you want to see both where (freq.) and what the shape if the bandpass looks like. Mismatching on either the primary or secondary side distorts both values. At 455Khz the amount of error is not drastic,
But it is clearly noticable.
At higher freqs. it can throw you waaayy off.
If your wondering is this IF can over, under or criticaly coupled... You need to do this right. (All effect the shape of

the bandpass curves.)

If all you want is to get somewhere in the ballpark, Carl is right... Lots of ways to get an idea of where you stand. If you want a good idea of the relitive "Q" of the DUT, put some extra effort into it, and try to match the impedances.

There is lots to learn about this.... Far more than I know. :-)

respectfuly
-Larry Ware
lrware@pipeline.com

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Michael Tallent <mtallent@concentric.net>
Subject: Re: Troubleshooting IF Cans??'s
Message-ID: <32B1F72F.40C6@concentric.net>

km1h@juno.com wrote:
>
> On Wed, 11 Dec 1996 22:38:19 -0600 (CST) vancleef@netcom.com (Henry van
> Cleef) writes:
> >As Dave Metz discourses
>

> >For LF coils, get out your trusty HP 200 CD audio oscillator, and make
> >your own Q meter. Add a bunch of resistance to the output leads (you
> >can experiment to get results), and hang a voltmeter across the coil
> >leads. If's are almost always open-circuit with power off, so some
> >clip leads will get you to it fairly easily. Tune up your 200CD and
> >watch for the peak. You should see about identical peaks from all the
> >IF coils. Yes, there is a way to derive Q from the peak-valley ratio,
> >but it isn't direct---big errors with this setup. Nonetheless, you
> >can tell whether you've got a peak, or need to pull the transformer
> >out and investigate.
>
>
> I am just a lowly tech with 40 years experience that spent many years
> repairing equipment (still do). I cannot profess a college degree but for
> many years my job was to correct "The Engineers" mistakes and get the
> circuit working AND reproducable so that it could actually be
> manufactured. In 1996 vernacular it may be called "street smarts".
>
> Anyway here are a few "by the seat of your pants" ideas that certainly
> will not be found in the Proceedings of the IRE-IEEE, etc.

>
> Equipment is a sig gen capable of 455 KHz of any parentage or price
> range. The AN/URM-25D is one that comes to mind at a very reasonable
> price.
> Next is a VTVM or a basic VOM. A factory RF Probe would be nice but at
> 455KHz anything will work. We are not looking for a measurement; just a
> meter indication. Any Handbook RF probe ckt will work.
>
> Couple the Sig Gen into the primary of the IF can (you can leave the
> tube in place or use a socket pin to inject the signal) thru a 1000pf
> capacitor. Attach the meter to the high end of the secondary or remove
> the tube and use the grid socket pin (or grid cap) to stick the probe
> into. You need a RF probe/ detector for this step.
>
>
> - Step up the genny impedence with a 9:1 toroid
> balun to get better injection. Certainly still far from ideal
> impedence matching but every lil bit can help at times.
> - Leave power on and put the meter (VTVM only) on
> the IF AGC line and look for an indication.
> - If even a VOM is not available you can make a
> real basic indicator with a 200 ua CB S meter (the more
> sensitive the better), a 1N34 diode and a 1 meg resistor
> and use as a hard wired FS Meter.
>
>
> >This method is also handy for finding inductance of AF iron stuff.
> >Just pick a suitable cap to resonate it with, and resonate it with the
> >audio oscillator. The old Q-meter formula, L=25330/(F^^2*C) will give
> >you the inductance.
> >
> >This "resonance" check is also a sure shot check for shorted turns
> >other funnies. If you've got a leaky cap or a shorted turn, you won't
> >get much (if any) resonance peak.

Hello: Well here are my comments as a 30 years plus design engineer. The purpose of the large "series resistance" is used to reduce loading of the IF transformer with low output impedance of the generator. That way the Q of the IF transformer will give a definate peak at resonance on the VTVM as the IF is tuned. This method is used to test any resonant circuit even out of the radio. To minimize capacitance loading of the VTVM probe you can add a large series resistor to the VTVM probe. The VTVM must have high enough bandwidth to respond at the IF frequency being tested, or use the RF probe as described, with any DC voltmeter. This is a brief explanation, I can expound by e-mail if needed. There are alot of ways to measure things without the specialized equipment we would all like to have.

73's Mike W6MXV
Analog design engineer, yes there is at least one left.

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: "Jim Berry" <basalop@eskimo.com>
Subject: Re: Tube life
Message-ID: <199612130759.XAA26392@mail.eskimo.com>

> To: Multiple recipients of list <boatanchors@theporch.com>
> Subject: Tube life

> Was looking through the 1942 Editors & Engineers RADIO HANDBOOK (Ninth Edition), and noticed the RCA ad in the back. In addition to the curve of tube life versus filament voltage (they claimed that reducing voltage 15% yielded up to a tenfold increase in tube life for pure tungsten filaments), they had a comment about idle time:
>

> 73.....Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA

Also, one time, I was chatting to a fella who worked at one of those coastal statiions. He told me if you have any control over the transmitter filament voltage, to turn it down until the power started to drop off. Your filaments would last forever.

73 Jim

Jim Berry K7SLI. QTH: Marysville, Wa (Near Seattle)
Email: basalop@eskimo.com FAX: 360-659-1360
Ham Digital: K7SLI @ K7SLI.#NWWA.WA.USA.NA
Snail Mail: 5318 142nd PL NE Marysville, Wa 98271

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Re: Tube life
Message-ID: <Pine.SUN.3.91.961213081739.5928B-100000@indy1>

Hi!

Morris correctly points out the amazingly-high exponential relationship between filament voltage and tube life. This is something I know a little bit about, thanks to running TV rigs with really expensive tubes in 'em (worst case, the RCA F-line, which may now be destined for a toxic waste dump and the finals for which cost in excess of US$7000.00!). And due to a nice monograph from a Voice Of America engineering type on the subject--what *his* tubes cost makes the ones in my old rig look like hamfest giveaways!

The VOA paper and my experience point to three conclusions:

1. *Don't* slam the juice to power tube fils; ramp 'em slowly and keep the inrush current *low.*
2. If you run them a lot, *don't* turn the filaments off. In many cases (especially if usage is on the low side of often), it pays to crank them down to "dark heat" when not in use: drawing current but hardly glowing. This avoids boiling all the emission off.
3. Keep filament voltage as low as possible! In TV service, where peak of sync is as close to 100% mod as we get (and white's 12.5%, yes we do send the pix "upside down!"), there's a very nifty way to do this:

A. Install new tube and run at rated filament voltage for a day.

B. After 24 to 48 hours, slowly dial down filament voltage 'til the tip of sync begins to compress; then run it up just past that point. Hey, presto: optimum value!

C. Check periodically--over the life of the tube (20,000 hours with the big ones if you've done everything right), you'll gradually have to turn the voltage back up and will run out of emission as you approach rated voltage.

In my application, fairly rough DC (three-phase FW bridge, no filter) was applied to the filaments and no way to reverse it; many of VOA's rigs run AC. In either application, the above rules apply and work the same way. So I don't think AC vs. DC is a major life improvement factor, at least for high-power tubes. If it was, VOA'd be installing rectifiers, their tubes are *that* costly!

Using this method, we took an aural PA tube (about 5kW plate diss.) out of service (when rebuilding after our fire) that had been in-socket, making power, for *nine* *years.* That's in the 78,000 hour neighborhood! (20K is considered the good side of "typical").

In ham applications, "dark heat" might be useful, especially if the power tubes are particularly costly or rare; but you'd *have* to set the rig up in a first-class professional manner, as leaving the juice on 24/7 does entail a degree of increased fire/other random failure risk. (Don't think I'll be doing it--don't trust the wiring much in this [rented] house and in the hamshack I have the freedom to be impossiblty sloppy, >blush<).

Controlled start-up is a more-applicable method, and might be as simple as a variac and filament voltmeter. (Do tack those meter leads right at the tube socket, there's usually significant drop!)

Rolling back the fil voltage in ham apps is easy enough--with a wattmeter or RF ammeter (and dummy load!), just key up and apply 100% mod if you're using 'phone, set the voltage to the rated value, and slowly back it down 'til output drops, then increase to just above that point. You can't do it "on the fly" as TV has the luxury of, but it doesn't take long nor much in the way of test gear.

For small tubes, I'd just make sure the heater voltage wasn't too high. While one could reduce it below rated value, the number of tubes in a typical receiver or low-level RF stage is high enough that at least one of 'em will likely "hit the wall" at 99% of rated. Receiving-type tubes were *designed* to run tens of thousands of hours with no more care than keeping voltage *at* the rating, so that should do fine. Controlling inrush might be useful; "dark heat" would be more trouble than it is worth.

73,
--Bobbi

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Richard Hager <rhager@millcomm.com>
Subject: Re: Tube life
Message-ID: <32B20335.3231@millcomm.com>

Bob Roehrig wrote:

> Am I dense or missing something here? What's the difference between
> having a diode in series with a bulb to dim it and having a half
> wave rectifier in an AA5 radio? It's not like we are feeding DC
> back into the power line.

Yep, that's exactly what it's like. An unbalanced load forces a DC current across the xformers up on the pole. Also distorts the AC waveform and produces more harmonics. Remember that AC line noise that was being yelled about recently here on BA....? (grin)

> The unsymmetrical load placed on the power
> grid because of only loading down one half cycle would be so minimal
> it would be unnoticed.

Agreed. One tiny little load. My original comment was about the marketing of such an item, which might put millions of little DC loads on the line. I was only making an observation of surprise, that such a thing would be approved by regulatory agencies, or meet NEC code.

Perhaps some study found that half of them end up on one side of the CT and half on the other side, so statistically it all balances out.

I do know that such a device would be illegal in Europe now. They have historically had stricter safety and power standards than the US, and the new regulations are very very difficult to meet, at low cost anyway...

Richard
--

Richard Hager

+ Ah-ha! Design Group, Inc. -
+ Precision CNC Technology, since 1991 -
+ 612-641-1797, Fax: 612-641-8681 -
+ "I just like to make things" So... -
+ please call Ah-ha! directly for CNC info -
+ http://www.gdic.com/ahha email: ahha@gdic.com -

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Richard Hager <rhager@millcomm.com>
Subject: Re: Tube life
Message-ID: <32B20539.564@millcomm.com>

Jim Berry wrote:

> Also, one time, I was chatting to a fella who worked at one of those coastal statiions. He told me if you have any control over the transmitter filament voltage, to turn it down until the power started to drop off. Your filaments would last forever.--

Now that -does- make sense. You have to figure that all parts of the tube, including the filament, are made to a spec that allows for mfg tolerances. In other words, if it's rated for 6 volts, it almost certainly produces enough emission at some percentage lower voltage.

My only concern would be: Does running right at the edge of sufficient emission increase the amount or likelihood of 'stripping' the cathode at all?

Perhaps one of the Masters of Fire could answer this...

Richard Hager

+ Ah-ha! Design Group, Inc. -
+ Precision CNC Technology, since 1991 -
+ 612-641-1797, Fax: 612-641-8681 -
+ "I just like to make things" So... -
+ please call Ah-ha! directly for CNC info -
+ http://www.gdic.com/ahha email: ahha@gdic.com -

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: "Benjamin D. Hall" <BDHall@ghgcorp.com>
Subject: Tube life revisited...
Message-ID: <32B179AC.1CAB@ghgcorp.com>

Hiya Folks... Been reading the tube life posts around here with a lot of interest and figured I'd summarized what I have learned.

1) Tube life is an 11th order exponential function. That means a very slight increase in filament voltage can decrease tube life significantly. This is very significant around my apartment, as Houston Lighting and Power supplies my wall outlets with about 130 VAC. This isn't really good as most of the transformers in the BA's are designed for less, as I've noticed that sometimes I've got as much as 7.2 VAC on the filaments here and there - definately NOT GOOD. I need to get that massive isolation and bucking x-former on line soon, especially with the R-390A being on whenever I'm working on my computer.

2) There doesn't seem to be any significant data supporting the claim that filaments will last longer running from DC than AC, and in fact, DC might be harmful to filaments, but there wasn't any siginificant data to support that claim either. However, many of the people with commercial tube experaince have noted that the SW broadcasters like VOA and TV/radio stations run their *very* expensive tube filaments off AC, and if there was a significant life extension afforded by running filaments off DC, these people would be doing it. Especially when these tubes can run into the multiple thousands of dollars range, and stud rectifiers for 100A at 50 PIV can be had for in the under $100 range.

3) Tubes usually fail during the current surge of powering up. Seems that if you can minimise the "brutality" of the cold start, you can prolong the life of the filaments...

Thanks to everyone for a very informative series of posts!

73,
Ben
--
Benjamin D. Hall, Houston Texas - Junque collector extraordinaire.
E-mail: BDHall@GHGCorp.com -or- Benjamin.D.Hall1@JSC.NASA.GOV

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: spr@earthlink.net (Scott Robinson)

Subject: Tube life>>half wave loads
Message-ID: <v01530500aed626b3d0d0@[153.34.196.14]>

Folks,

Every AC-DC radio (except the minute few with FW voltage doublers) is a half wave load for about 1/3 of its current drain. Only one diode in a 35Z5, y'know...

As far as power dain requirements, the Europeans, champion beaurocrats that they are, have in fact imposed a mains harmonic current drain requirement. Basically, you can only conform to it with a fine, high-quality choke input filter or a fancy pre-switcher switcher doodad if size, weight, and cost bother you. It takes effect soon, within the next year or so for loads over either 50 or 75W, I forget which. No transformer/rectifier/filter cap power supplies need apply for entrance to Europe.

They also have various RF immunity and emission rules, and many, many other things. Example: no slots in enclosures with hazardous voltages inside can be more than 4mm wide, so that gold chain you're wearing won't slip through a hole and zap you. Most are in principle sensible, but the test limits are sometimes stupid and the standards are beyond impossible to read and decipher and all refer to each other!

Fun 'n games...and full employment for yours truly, an analog engineer working for a company with about half its sales in Europe.

Regards,

Scott Robinson
spr@earthlink.net
"Wait'll he puts on his stereo headphones..."

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: MEC <danmec@inet.uni-c.dk>
Subject: Re: W1BCG, TPTG, qrg 1812
Message-ID: <Pine.3.89.9612131153.A24674-0100000@inet.uni-c.dk>

On Thu, 12 Dec 1996, Larry Kayser wrote:

> Greetings:
>
> Just worked W1BCG on 1812 Kc, with the TPTG rig. He was 597 here, although
> most of the guys were giving him 599 for some reason, guess they don't know

> what "T" stands for....

Well, this raises an interesting point !

Why is everybody giving the East-Europeans T9 report when they definately
are T5-T7 ?
We never get them to clean up their TX's unless we all start giving them
something closer to a correct report.
Some of the Russian and Ukrainians are ruining 10 kHz of the band
sometime with keyclicks, chirp,spurious etc !

I have suggested to K3EST that the CQ WW should have a penalty for lousy
signals. When they fire up their 10KW amplifiers after a poor old military
transmitters it is no fun on f.ex 40,80 and 160 here.

73 Rag OZ8RO

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: wj5j@juno.com (John D Hensley)
Subject: Wanted: BC457A and BC458A Command sets; Military Mill; ACP131
Message-ID: <19961213.185414.5143.1.wj5j@juno.com>

Greetings folks,

I'm building a small cw position around a Central Electronics
model 20A and would like to find a BC457A (4-5.3 mhz)
or BC458A (5.3 - 7mhz) or BC459A (7mhz- ?) Command
Set xmtr to modify for use as a VFO for the 20A. Prefer
excellent condition if you want to sell, or complete if you
have an old dusty one laying around. PLease contact me
via private email < wj5j @ juno.com >.

Still looking for a manual mill (A.K.A. typewriter) for use on
cw and would prefer the all caps Navy surplus unit if anyone
has one and does not use it anymore. With 600+ members
on the list, surely someone has one gathering dust !

Also want to buy a clean copy of ACP-131 (?) or HOPub104,
or something similar which details standard commercial and
military code signaling.

Very 73 to all,

Doug WJ5J

**************** WJ5J / NNN0BXX / RNARS 4412 ***************

Wanted: Power supply for Hallicrafters HA6 transverter and
Heath KL1 linear (p.s. is called the KS1); 800 hz filter for the
75A3; 800 hz filter for the 51J4; XCAL module for the HRO60;
Heath HO-13 panadaptor; 8ma-10ma meter for Heath HX-11
*********************** wj5j @ juno.com **************************

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: "Joseph W. Pinner" <kc5ijd@net-connect.net>
Subject: What's in my mil collection
Message-ID: <199612132329.RAA01584@dns1.net-connect.net>

I think that Dave's idea is a good one.

Here is much of my mil collection.

TYPE UNIT or SYSTEM	ORIGINAL or MODIFIED	COMPLETE or INCOMPLETE	WORKING or PROJECT
BC-342	Original	Complete	Project
BC-348P	Modified	Complete	Working
BC-611B & F (w/I-135 & test fixtures)	Original	Complete	Working
BC-652	Original	Complete	Project
BC-654/SCR-284 (w/PE-103 & cables)	Original	Incomplete	Project
BC-1335	Original	Incomplete (need rear antenna support)	Project
GRC-9/RT-77	Original	Incomplete	Project
GRC-106A	Original	Complete	Working (RT-824) Project (AM-)
PRC-6/RT-196A	Original	Complete	Working
PRC-10A	Original	Complete	Working
PRC-21	Original	Incomplete	Project

PRC-25	Original	Complete	Working
PRC-36	Original	Complete	Working
PRC-40	Original	Incomplete (need antenna & mike)	Project
PRC-41	Original	Complete	Working
PRC-47	Original	Complete	Project
PRC-66	Original	Complete	Working
PRC-68	Original	Complete	Working
PRC-68A	Original	Complete	Working
PRC-74A, B	Original	Complete (B) Incomplete (A)	Working Working
PRC-75	Original	Complete	Project
PRC-77	Original	Complete	Working
PRC-126	Original	Complete	Working
PRC-127	Original	Complete	Working
PRC-128/AM-7302	Original	Complete	Working
PRC-277 (Israel)	Original	Complete	Working
R-110/GR	Original	Complete	Project
RT-68/PP-1175	Original	Complete	Project
RT-70A/AM-65	Original	Complete	Working
RT-524A	Original	Complete	Working
TBY-8 (w/AC Supply)	Original	Incomplete (need antenna)	Project
USM-3A	Original	Incomplete (need some tools)	Project
WS Mk 128 (UK)	Original	Complete	Project

73

Joseph W Pinner
Lafayette, LA
KC5IJD
EMail: kc5ijd@net-connect.net

From boatanchors@theporch.com Fri Dec 13 20:46:38 1996
From: Ronnie Hull <larebel@ms1.nwla.com>
Subject: WTB - VALIANT
Message-ID: <1.5.4.16.19961213190655.21ef646c@ms1.nwla.com>

Hi fellows

I am in the market for a Johnson Valiant. It does not have to be cosmetically perfect. I will not pay 450 for one under any circumstances!!! But I want one that is electrically sound. Can anyone steer me onto one?

Still have a fine business Johnson Invader to trade or sell. Cosmetically, it is a 7. Electrically, it is a 10. Works great. But its just not what I want.

I am also in the market for a TV7, a URM25 and a DRake 2-B and 2BQ

Ronnie

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: johnz@earthlink.net
Subject: WTB: Manuals for a few Projects
Message-ID: <199612131806.KAA10175@armenia.it.earthlink.net>

With the semester break just about to start I am looking forward to a few extra moments between grading final exams to give some patiently waiting BA's here the attention they deserve! I would be most grateful (and, of course, willing to provide the usual reasonable amenities) if you could help me with copies of any of the manuals and schematics for the following:

Sprague Tel-Ohmike TO-5 Capacitor analyzer.
(This unit works for about ten minutes when first turned on, then "fades out". Tubes check out "OK".)

General Radio GR 1001-A Standard Signal Generator.
(RF output good but internal modulator doesn't work. Have had it apart a

number of times, checking tubes ("OK") and parts in what looks to be the
modulator section.)

Multi Elmac AF68A and M-1070 Power Supply.
(I have wanted to put this little unit on the air for some time. Totally
dead operating from AC or DC.)

Galaxy V Mk? and Power Supply.
(This one also refuses to start. I understand that there are a couple of
versions of this model? This one has a hinged top lid that simply lifts
open to give easy access to the final PA high voltage plate caps and other
deadly areas!)

Thanks and Happy Holidays to All!

John Zitzelberger W6GL
Thousand Oaks, CA

From boatanchors@theporch.com Fri Dec 13 16:59:04 1996
From: Laird_Tom_N@hpmail1.90.deere.com
Subject: WTB: parts
Message-ID: <H00005a004720642@MHS>

W9UD (Jim) is in need of a T-368 bandswitch. He is also looking for
5 volt 28 amp filament transformer. Can someone help him out?

Jim's number is 309-799-7447 eves

From boatanchors@theporch.com Fri Dec 13 10:31:39 1996
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: WTD: 6C4 tube -Reply
Message-ID: <199612130828.BAA06944@netcom2.netcom.com>

As Mike Sewell discourses
>
>
> I won't tell you what I paid for each piece, but, I WILL tell you that I filled
> the trunk of my '80 Cordoba, the back seat, and the passenger side of the front
> seat for a little over $400. As far as I'm concerned, that's nearly BA
> nervana!!!
>

Gee, I thought I was the only one still pushing around an '80 Cordoba.
I've had it since I bought it off the showroom floor, new----17 years
now. I can think of twice that it barely escaped hitting the

junkyard. Last time around, the junkyard furnished a whole bunch of stuff, and the car has driven another 25,000 miles.   Oldest car in the parking lot at work.

Of course, when it comes to going on a buying expedition (hamfest, etc.) I take the other jalopy---an '86 GMC C-10 pickup. I went to a hamfest in the summer in Texas a year and a half ago, and pulled it around to pick up some stuff in a tailgate area. That was a big mistake. Two guys wanted to go home, so they relieved me of $150 and filled up the pickup (yeah, it's the full size 8 foot model). They wanted more, but that's all I had.

The real problem with this is that other people's parts units tend to be my fixer-uppers. The only "picked bones" that came out of that were a few parts for a Meissner EX Signal Shifter (I made one out of two parts units) and a Hickock wannabe-545 scope, which is only half picked over at this point, and still furnishing parts for various things. About the only thing it hasn't furnished parts for is the Cordoba.

--
===
Hank van Cleef
E-mail vancleef@netcom.com or vancleef@tmn.com
===